

## **REMARKS**

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

### **Status of Claims**

Claims 7-9 and 17-19 were previously cancelled. Claims 3, 13, 33, 34, 36, and 41 are currently being cancelled without any prejudice and/or disclaimers. Claims 1, 11, 21, 27, 35, and 40 are currently being amended. No new claims are being added. After amending the claims as set forth above, Claims 1-2, 4-6, 10-12, 14-16, 20-32, 35, 37-40, and 42-44 are pending and under consideration.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

### **Response to Claim Rejections**

Claims 1-6, 10-16, and 20-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Hullinger et al. (U.S. Patent No. 6,295,092).

With respect to Claim 1, the rejection is traversed for the following reasons.

Claim 1 is amended to include the features of the cancelled Claim 3. As such the following reasons are presented in response to the rejections that were reported in the office action with respect to Claims 1 and 3.

Claim 1 as amended recites a method for generating metadata describing a video program, the method comprising:

obtaining, by a programmable device corresponding to the video program from a production system used in the production of the video program;

assigning, by the programmable device, respective numerical goodness of fit scores to respective predefined categories based on analysis of the production data to describe the subject matter of the video program, wherein the numerical goodness of fit score assigned to a category represents a degree to which the category is descriptive of the subject matter of the video program;

assigning, by the programmable device, keywords to the video program based on analysis of the production data; and

storing, by the programmable device, numerical goodness of fit scores and keywords for the video program in a computer readable medium in association with time data and descriptive data for the video program as metadata describing the video program;

wherein said predefined categories are subject matter categories arranged in a hierarchy comprising at least a set of top-level categories, respective sets of first level sub-categories each corresponding to and encompassed by a top level category, and respective sets of second level sub-categories each corresponding to and encompassed by a first level sub-category (Emphasis added).

Hullinger differs from the claimed invention in several ways. Many of those distinctions were previously described in the responses to prior office actions. In addition to those points, Hullinger does not teach, suggest, motivate, or render predictable a method that assigns, by the programmable device, respective numerical goodness of fit scores to respective predefined categories based on analysis of the production data to describe the subject matter of the video program, wherein the numerical goodness of fit score assigned to a category represents a degree

to which the category is descriptive of the subject matter of the video program; and wherein said predefined categories are subject matter categories arranged in a hierarchy comprising at least a set of top-level categories, respective sets of first level sub-categories each corresponding to and encompassed by a top level category, and respective sets of second level sub-categories each corresponding to and encompassed by a first level sub-category.

Instead, Hullinger is a system that records news broadcasts and parses them into individual stories based on analysis of the recorded closed caption data. Hullinger determines the types of news stories that generate the highest ratings. The basic system is shown in Figure 1: Signals of television news programs are recorded (4:19-28) by capture machines 14, 16, 18. A server processes the recorded signals along with ratings data. The server parses the news programs into individual news stories with each news program by processing the closed caption data ("raw .CC text file") that was received as part of the recorded signal, as shown in Figure 3: Parsing is performed by comparing phrases in the closed caption text to historical information that associates phrases and story topics, such as "national," "international," "weather," etc. (4:37-49; Fig. 7; col. 7 – col. 9). This allows the generation of reports that show the amount of time devoted to various topics in the news program (Fig. 11) or that show topic selections and ratings data for the same period of time (Fig. 15).

In the Office Action, the Examiner in the rejection of Claim 1 has equated categories of the claimed invention to the Hullinger's categories listed in Table 1 such as Topic N, Talent N and Production N. However these categories are not hierarchical as currently amended, and as was previously recited in Claim 3. On the other hand, the Examiner in the rejection of Claim 3, had equated the claimed hierarchy to the hierarchy of a different object that is shown in Figure 6. In other words, the categories of Table 1 are not the categories of the hierarchical structure that the Examiner has pointed to in Figure 6. In fact, in Figure 6, the categories are not subject matter categories. Instead they are categorized by station and time. Therefore, the categories of Table 1 do not have a hierarchical structure because they do not have subcategories and they have nothing to do with the hierarchy of Figure 6. And, Figure 6 is not a hierarchy of subject

matter categories. Therefore, Hullinger does not have a hierarchy of subject matter categories. As such, Claim 1 is distinguished from Hullinger at least by that distinction.

Furthermore, the goodness of fit scores assigned in Claim 1 are different than the scores in Hullinger because in Claim 1 a goodness of fit score assigned to a category represents a degree to which the category is descriptive of the subject matter of the video program. Instead in Hullinger, as shown in Column 6, 25-65 scores represent the number of times that particular phrases occur in closed caption text. In column 7, lines 28-65 discusses tables that store these counts and the manner in which those tables are used in a parsing process to combine individual phrases into an attempt to identify longer strings of related words.

In view of the above distinctions, Claim 1 is patentable over Hullinger. Accordingly, the rejection of Claim 1 under U.S.C. 102(e) as being unpatentable over Hullinger is respectfully traversed.

The rejection of Claims 2, 3, 5, 6, and 10 is also respectfully traversed. These claims each are dependent on the Claim 1, and as such they are patentable over Hullinger, at least for the same reasons and distinctions explained above with respect to Claim 1.

Regarding Claim 4, it requires the determination of a representative subset of numerical goodness of fit scores (claim 4) from among a set of numerical goodness of fit scores that were determined for a particular program (claim 1) and then storing the representative subset. There is no process in Hullinger that generates scores for a particular program, and then determines and stores only a subset of those scores for the program.

Regarding Claim 5, it requires that rundown data is received from a production system. "Rundown" data is a term of art in the television production field that refers to data indication events that occur within a program. One of ordinary skill in this field would not consider simple program schedule data (i.e. the broadcast times of programs) to constitute rundown data. The terms must be interpreted in the manner of one of ordinary skill in the art, and applicants

have already established that understanding by supplying an example of rundown data in the application (Figure 4).

The rejection of Claim 11 is also respectfully traversed. This claim is a system claim similar to the method Claim 1, and as such is patentable over Hullinger, at least for the same reasons and distinctions explained above with respect to Claim 1.

The rejection of Claims 12, 13, 14, 15, 16, and 20 is also respectfully traversed. These claims each are dependent on Claim 11, and as such they are patentable over Block in view of Hullinger, at least for the same reasons and distinctions explained above with respect to Claim 11.

Additionally, Claims 14 and 15 are similar to Claims 4 and 5 respectively. As such, the specific distinctions that were outlined above for Claims 4 and 5 apply to Claims 14 and 15 respectively.

With regard to the rejection of Claim 21, this rejection is also respectfully traversed. This claim is a method claim similar to the method Claim 1, and as such is patentable over Hullinger, at least for the same reasons and distinctions explained above with respect to Claim 1.

The rejection of Claims 22, 23, 24, 25, 26, and 31 is respectfully traversed. These claims each are dependent on the Claim 21, and as such they are patentable over Hullinger, at least for the same reasons and distinctions explained above with respect to Claim 21.

In addition to above points noted regarding Claims 21-23, the following distinctions are to be considered.

Independent Claim 21 describes processing that obtains production data from a production system and processes the production data to generate keywords that describe the programming event. In particular, the processing uses production data to identify a set of

candidate key words, i.e., a set of words from which the keywords for the program are selected. The claims specify that each keyword is provided as input to a classification tool, a set of scores corresponding to subject matter categories is generated for each candidate keyword, and a set of keywords is selected based on those scores.

Hullinger describes a system that records a television program and counts the number of occurrences of individual words and phrases.

In regard to the claim requirement of providing a candidate keyword as input to a classification tool and generating goodness of fit scores indicating how descriptive various subject matter categories are of that keyword, the official action cites col. 6, lines 25-67. The cited text describes the data that are associated with individual phrases in Hullinger's system. This data includes: an ID for the phrase; the total number of times it has appeared in closed caption data; the number of times it has appeared in closed caption data concerning a particular topic; the number of times it has appeared in closed caption data of a particular speaker ("talent"); the number of times it has appeared in closed caption data for a particular type of production (live, taped etc.). This does not constitute generating for each candidate keyword a set of goodness of fit scores corresponding to subject matter categories, where each goodness of fit score represents a degree to which the category is descriptive of the candidate keyword. For example, Hullinger gives sports and weather as examples of topics. In accordance with the cited portion, each word used in closed caption data will have a count of how many times it has been used during segments concerning each of those topics. However this does not indicate the degree to which "sports" or "weather" is descriptive of that word. It merely indicates how many times that word has been said in segments that dealt with sports or weather as a whole. Depending on the word, "sports" or "weather" might not be descriptive of that word at all, even though it has been used many times in sports or weather segments.

In regard to the feature of selecting keywords based on their set of scores assigned to categories, the official action references col. 8, line 50 – col. 9, line 35. The cited text describes a process of determining whether the text contained in two lines of closed caption text (each

line being referred to by Hullinger as a “segment”) is best described by one of three topics (local, national, international). To do so, Hullinger’s system combines the lines of text and searches them for the longest phrases (up to three words long) for which the system has scores (appearance counts) in its databases with respect to those topics. The system retrieves those scores and combines the scores for all of the phrases to produce total scores under each category (see Table at col. 9). The system selects the topic with the highest score as the topic for the two combined lines of text. In contrast, the claim requires that keywords are selected from among candidate keywords based on their sets of numerical category scores.

Regarding Claim 22, the official action references the table at col. 9, which shows words and phrases of closed caption data. The claims require that candidate keywords are determined by identifying verbs and nouns in the production data and using the verbs and nouns as candidate key words. The table at col. 9 includes verbs and nouns but there is nothing to indicate that Hullinger performs a process to identify the verbs and nouns and use them as candidate keywords. The fact that the table contains words that are not verbs or nouns shows that Hullinger does not perform such a process.

Regarding Claim 23, the official action references col. 9, lines 31-48. The cited text describes the process of storing the topic-related scores for two lines of closed caption text after determining those scores. The process for determining those scores was described above. The claim requires that descriptive information for the production data is provided as input to the classification tool, a set of numerical scores associated with subject matter categories is generated for the descriptive information, and then correlations between the set of category scores for the descriptive information and the set of category scores for each candidate keyword are identified. Hullinger does not perform such processing.

The rejection of Claim 27 is also respectfully traversed. This claim is a device claim similar to the method Claim 21, and as such is patentable over Hullinger, at least for the same reasons and distinctions explained above with respect to Claim 21.

The rejection of Claims 28, 29, 30, 31, 32, and 34 is respectfully traversed. These claims each are dependent on the Claim 27, and as such they are patentable over Hullinger, at least for the same reasons and distinctions explained above with respect to Claim 27.

Additionally, Claims 28 and 29 are similar to Claims 22 and 23 respectively. As such, the specific distinctions that were outlined above for Claims 22 and 23 apply to Claims 28 and 29 respectively.

The rejection of Claim 35 is also respectfully traversed. This claim is a method claim similar to the method Claim 1, and as such is patentable over Hullinger at least for the same reasons and distinctions explained above with respect to Claim 1.

In addition to above points noted regarding Claim 35, the following distinctions are to be considered.

Claim 35 recites features including a processing in which individual segments of a video program are identified, and metadata for the individual segments is created. Hullinger describes a process in which segments of a television news program are identified, however in Hullinger the segments are identified by an individual who must manually view the program and determine the start and end times of each segment and the topic of the segment, see col. 9, line 49 – col. 10, line 13. Although Hullinger states that the classification process could be automated, Hullinger does not teach how that could be accomplished. Hullinger thus fails to enable that feature and therefore cannot be asserted to anticipate that feature. Consequently, Hullinger does not anticipate a system that processes production data to identify individual segments of a video program.

The rejection of Claims 36, 37, 38, and 39 is respectfully traversed. These claims each are dependent on the Claim 35, and as such they are patentable over Hullinger, at least for the same reasons and distinctions explained above with respect to Claim 35.



Additionally, Claims 37 and 38 are similar to Claims 4 and 5 respectively. As such, the specific distinctions that were outlined above for Claims 4 and 5 apply to Claims 37 and 38 respectively.

The rejection of Claim 40 is also respectfully traversed. This claim is a system claim similar to the method Claim 35, and as such is patentable over Hullinger at least for the same reasons and distinctions explained above with respect to Claim 35.

The rejection of Claims 41, 42, 43, and 44 is respectfully traversed. These claims each are dependent on the Claim 40, and as such they are patentable over Hullinger, at least for the same reasons and distinctions explained above with respect to Claim 40.

Additionally, Claims 42 and 43 are similar to Claims 14 and 15 respectively. As such, the specific distinctions that were outlined above for Claims 14 and 15 apply to Claims 42 and 43 respectively.

Accordingly, the rejection of Claims 1-6, 10-16, and 20-44 under 35 U.S.C. 102(e) as being unpatentable over Hullinger et al. (U.S. Patent No., 6,295,092), is traversed.

#### **Concluding Remarks**

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

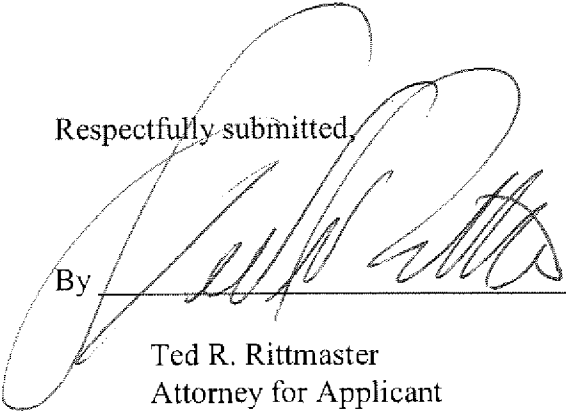
The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the

unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

By

A handwritten signature in black ink, appearing to read 'Ted R. Rittmaster', is written over a horizontal line. The signature is fluid and cursive.

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